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**Half-Life Practice Problems**

1. Iodine-131 is used to destroy thyroid tissue in the treatment of an overactive thyroid. The half-life of iodine-131 is 8 days. If a hospital receives a shipment of 200g of iodine-131, how much will be left after 32 days?
2. Technetium-99 is used for brain scans. If a laboratory receives a shipment of 1000g of this isotope, how much will remain after 24 hours? The half-life of technetium-99 is 6 hours.
3. Mercury-197 is used for kidney scans and has a half-life of 3 days. If a shipment of 32 grams is ordered, but it takes 15 days to arrive, how much would arrive?
4. The half-life of strontium-90 is 25 years. How much strontium-90 will remain after 100 years if the initial amount is 4 grams?
5. How much of a 500-gram sample of potassium-42 is left after 62 hours? The half-life is 12.4 hours.
6. The half-life of radon-222 is 3.8 days. How much of a 100-gram sample is left after 15.2 days?
7. A 208-gram sample of sodium-24 decays to 13g within 60 hours. What is the half-life of this radioactive isotope? *This is a new type of problem, but I want you to try it!*